

The Effectiveness of DARE and Other Drug Use Prevention Programs

I would like to comment on the conclusions regarding the effectiveness of school-based prevention strategies for alcohol and marijuana use presented by Ennett and colleagues in their meta-analysis of Drug Abuse Resistance Education (DARE) and other intervention programs.¹ (Readers should refer to the article by Ennett et al. for the references of those research reports used in the meta-analysis.) I do not dispute their main conclusion that the effects of DARE on alcohol and marijuana use are small, but rather their claim that other "interactive" programs are more effective. Their analysis does not support this conclusion for two reasons. First, few of the programs they use for comparative purposes deal with alcohol and marijuana. Second, the majority of those that do deal with these substances are unlike DARE both conceptually (i.e., in terms of the theoretical models on which they are based) and operationally (i.e., in terms of the components of which they are comprised).

Appendix B of Ennett and colleagues' paper lists 24 research reports, the data from which are used to estimate effect sizes for comparative purposes. Two of these reports (Dubois et al. 1989; McAlister 1983)¹ are unpublished, and I know of no published accounts covering the same material. Thus, it is impossible to comment on these. One other report is a dissertation abstract containing no data (Sarvela 1984). Of the remaining 21 reports, 9 deal exclusively with cigarette smoking (those by Flay and colleagues and Schinke and colleagues). This leaves 13 reports, some of which pertain to the same study. The papers by Dielman et al. (1986, 1987, 1989) and Shope et al. (1988) report data from a single evaluation, as do those by Moskowitz et al. (1984) and Schaeffer et al. (1981). Thus, one is left with eight evaluations, two of which deal only with alcohol (the Dielman et al. study and Allison et al. 1990) and six of which deal with both alcohol and marijuana (Gersick et al. 1988; Gilchrist et al. 1987; Johnson et al. 1987; Sarvela and McClen-don 1987; Moskowitz et al. 1984; Schaps et al. 1984).

This small pool of relevant comparison studies is further diminished when one considers the type of program that each describes. As Ennett et al. observe,

DARE is a broad-based social skills training program targeted at children aged about 10 or 11 years. Social skills training programs combine elements of the "affective" approach to drug use prevention that was popular in the 1970s (e.g., self-esteem enhancement, decision-making skills) with the resistance skills training approach that has dominated the field since the mid-1980s. Of the eight studies used for comparative purposes, four are affective programs (three of which were delivered to teachers, not students), two are resistance skills training programs, and one is a social skills training program. The remaining study—Project SMART—involves a comparative evaluation of affective, resistance skills training, and social skills training programs. Ennett et al. cite an unpublished report pertaining to this study, so it is difficult to determine which of the Project SMART programs are included in the meta-analysis. Assuming that both the Project SMART social skills training and resistance skills training programs are included, Ennett et al.'s suggestion that more emphasis be placed on "social competencies" in preventing alcohol and marijuana use among adolescents rests on data from just two programs that are similar to DARE in content (i.e., the two social skills training programs) and, to a lesser extent, the three resistance skills training program evaluations. This fact is obscured by the use of meta-analysis.

It has been observed that the use of meta-analysis in areas of research where interventions are designed in accordance with quite distinct conceptual models leads not to greater clarification of issues but rather to increased confusion, because one is essentially comparing apples and oranges.² In assessing the effectiveness of DARE and other school-based programs in preventing alcohol and marijuana use, the meta-analysis presented by Ennett et al. compares eight apples (the number of DARE studies included in the analysis) with two apples (the non-DARE social skills training programs), three oranges (the resistance skills training programs), and four lemons (it is generally acknowledged that so-called affective programs have little impact on student drug use). A recent report by the National Research Council draws attention to the weakness of meta-analysis as applied to drug abuse prevention research and suggests that more can be learned from a careful examination of programs with "discrete modular characteristics."³ From this perspective, an effective intervention

is one that shows consistency in reducing drug use across (methodologically sound) evaluations. I know of no such review dealing with program effects on marijuana use among participants. However, with regard to alcohol use, neither social skills training programs nor resistance skills training programs show such consistency across evaluations.³⁻⁵ □

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References

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Ennett and Colleagues Respond

Gorman has indicated two primary reasons for disagreement with our conclusion that "interactive" drug prevention programs are more effective than DARE. The first is the small number of programs used in the evaluation. As explained below, the number of programs is greater than Gorman assumes. Furthermore, our analysis of effect sizes demonstrated statistically significant differences based on the number of programs included in the study. The second issue raised is that DARE is conceptually and operationally different from the programs to which it was compared. Even if this were the case, which it is not, it would not invalidate our conclusions. Indeed, a primary purpose of our study was to examine the relative effectiveness of different types of prevention programs on the basis of common outcome measures. Because DARE shares both conceptual and operational elements of "affective" and social skills training programs, DARE effect sizes were compared separately with effect